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Address Reply to:
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August 20, 1982

Hand Delivered

Mr. Al Manzardo, Chief
Permits Section
U.S. EPA, Region V
230 South Dearborn Street
Chicago, IL 60604

Dear Mr. Manzardo:

Re: Comments on Draft Permit No. IN 0000281
for USSC-Gary

We have reviewed the draft NPDES permit for U.S. Steel Corp-Gary Works and Tube Specialities. Our comments are as follows:

I. Water Quality Impact. Although the proposed limits pose minor problems concerning potential violations of applicable water quality standards in the Grand Calumet River for cyanide and phosphorus, we have concluded that the only potentially significant water quality impacts arise for Phenols. The parameter of Temperature also warrants discussion.

Phenols: Our analysis of expected instream water quality in the Grand Calumet River indicates that the proposed effluent limits for phenols (which are the same as previous limits) will allow potential violations in the water quality standard (0.01 mg/l pursuant to 330 IAC 2-2-5) from Outfall 002 to points downstream of Outfall 034. Enclosed as Attachment I is a table depicting water quality impact for several parameters. These potential water quality standard violations may have been discussed and ultimately disregarded when the original NPDES permit was negotiated since the State contractor's wasteload allocation report for the Calumet region makes the same observation we do here. Nonetheless, we believe the Company's ability to achieve more stringent phenol limits should be explored.

The following effluent limitations would provide a reasonable accomodation with the 0.01 mg/l standard:

Outfall	Effluent Limitation Maximum Daily lbs/day
002 (GW-1)	3.5
007 (GW-2)	4.0
017 (GW-5)	0.5
020 (GW-7A)	10.75
034 (ST-17)	10.00

There would be some room for shifting allowed pounds among outfalls so long as the same total poundage were achieved but not as loosely as the present "quasi-bubble" allows.

Temperature

We would prefer to substitute, for your footnote 1 - Thermal Limitations, the thermal discharge limits of the permit we drafted for USSC back in late 1979. Our thermal limitations were the same for the Lake Michigan discharges. However, for discharges to the Grand Calumet River, our permit would have required compliance with thermal water quality standards (330 IAC 2-2-5(b)(5)) which vary from month to month. U.S.S.C. did not object to this requirement when public noticed in late 1979. Our review of 1981 effluent data indicates that USSC should be able to comply with the thermal standards. Thus, we see no need to waive the standards since exceedances could theoretically cause adverse effects on aquatic life as pointed out in the Section 316(a) Thermal Demonstration Report. A copy of the thermal limitations is enclosed as Attachment II.

II. Flow - Proportional sampling - We note that flow-proportional composite samples are specified for 017 (except for lead - an oversight?) but not for other outfalls. In our opinion, flow proportional sampling should be specified for all composite samples.

III. Phenols - Analytical Method. The 4AAP analytical method is specified in final effluent limits for all outfalls with phenol limits except 002. We believe it should be specified for 002 also.

Specific Outfall Comments

002 - final limits (page 8)
- Specify 4AAP method for Phenols
- Add the paragraph specifying that "samples taken in compliance with the monitoring requirements shall be taken at a point representative of the discharges prior to entry into the Grand Calumet River."

017 - Ok, assuming no compliance schedule needed for the alkaline chlorination system.

007 et al. (page 4)
- add "MGD" units for flow

039 - interim and final - ok, if compliance date is ok.

028, 030 (page 11) - the language is missing concerning 1) pH limits, 2) limits on floating solids or visible foam, and 3) Samples shall be taken at a point representative of discharge prior to entry into the Grand Calumet River.

604 (page 13)

- Will a compliance schedule not be needed to install monitoring equipment for naphthalene and tetrachloroethylene? Also, for these two parameters, would it be more protective (and reasonable) to specify an initial monitoring frequency of weekly samples and reduce to monthly sampling if only low quantities detected?

Very truly yours,

Larry J. Kane

Larry J. Kane, Chief
Permits Section
Division of Water Pollution Control

Enclosures

Attachment I. Instream Pollutant Concentrations – Grand Calumet River

Outfall #	NH_3 L ①	NH_3 L+M ②	NH_3 M ③	CN ? L	CN ? L+M	CN ? M	Phenols L	Phenols L+M	Phenols M	SO_4 L	SO_4 L+M	SO_4 M	Fl L	Fl L+M	Fl M	BOD_5 M	Cumulative Flow (mgd)	Chloride L
002	.091	.091					.032	.032	.008								21	
	.046	.046	.167				.016	.016	.007								42	
005	.100	.101	.32						.0074								23	
	.044	.053	.117						.0038								44	
007	.052	.817	.953				.030	.016									36.7	
	.033	.52	.607				.019	.014									57.9	
010	.047	.911	1.03				.030	.018									46.7	
	.031	.601	.683				.020	.012									61.7	
	.046	.711	1.01														41.7	
	.031	.591	.672														62.7	
017	.046	.867	.972	.181	.186	.017			.018								42.9	
	.032	.582	.666	.122	.125	.013			.012								63.9	
018	.023	.512	.572	.088													88.8	
	.019	.414	.463	.071													109.8	
019	.015	.332	.370														137.1	
	.013	.288	.321														158.1	
020	.505	.733	.857	.055			.0148	.018	.0066								226.6	
	.462	.762	.784				.0136	.016	.006								247.6	
021																	226.7	
																	247.7	
028		.687															256.1	
																	277.1	
030																	313.3	
																	334.3	
2																	320.6	
																	341.6	
033							.0104	.0125									323.2	
							.0097	.012									344.2	
034	.346	.560			.056		.018	.02									346.7	
	.326	.528		.049	.052		.017	.019	.0064	21.5	37.97		.855			4.85	367.7	28.

Footnotes

L

(1) Concentration calculated from flow-weighted % of pollutant poundages allowed by permit from outfalls 002, 017, 020, 028, 030 & 034 @ long-term average flows from all outfalls to Grand Calumet River

L + M

(2) Concentration calculated from permit-limited pollutant poundages from process outfalls and measured long-term average pollutants poundages from application for nonprocess outfalls all @ long-term average flows

M

(3) Concentration calculated from measured long-term average pollutant poundages from application for all outfalls @ long-term ave flows

Footnote #1
THERMAL DISCHARGES

a. Thermal limitations for Grand Calumet River Outfalls 002, 007, 010, 015, 017, 018, 019, 020, 021, 028, 030, 032, 033, and 034.

The temperature of the effluent shall not cause the receiving water outside the zone of admixture to exceed the temperature limitations specified in Indiana Regulation SPC 7R3 (330 IAC 2-2-5(b)(5)).

These limitations are applicable at any point in the stream except for mixing zones for the various outfalls In such areas cognizance will be given to the opportunities for the admixture of waste effluents with the receiving water.

b. Thermal limitations for Lake Michigan Outfalls 035, 036, 037, 038, and 039.

On the basis of the permittee's 316(a) thermal discharge demonstration, submitted January 1978, the permittee may operate in its current cooling mode from the above Lake Michigan Outfalls. Indiana Water Quality Standards for temperature are waived unless flow and heat rejection rates exceed present maximums for existing units.

The revision of the above thermal limitations or the requirement for another Thermal Demonstration may result from a permit modification request submitted by the permittee due to planned production changes which would result in increased thermal discharges.